

I claim:

1. A method for transmitting data between a head part and a base part of a hands-free telephone, which comprises:

digitizing information to be transmitted;

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AI spreading the digitized information over a wider frequency band using a CDMA technique;

performing a digital to analog conversion on the spread digitized information;

converting the digital to analog converted spread information into an ultrasound signal; and

transmitting the ultrasound signal via an air interface.

2. The method according to claim 1, which comprises, before digitizing the information to be transmitted, compressing the information to be transmitted using compression coding.

SAC
AI 3. The method according to claim 1, which comprises reducing an effective bit rate of the information to be transmitted to about 1-10 kbit/s when performing the compression coding.

4. The method according to claim 1, which comprises:

at a receiver component, receiving the transmitted ultrasound signal and converting the received ultrasonic signal into an analog electrical signal;

performing an analog to digital conversion on the analog electrical signal;

despread the analog to digital converted signal using a CDMA technique.

5. The method according to claim 1, wherein in performing the step of transmitting the ultrasound signal, the ultrasound signal is transmitted at a frequency between 200 and 400 kHz.

6. The method according to claim 1, wherein in performing the step of spreading the digitized information, the digitized information is spread to \pm 100 kHz.

7. A hands-free telephone comprising an ultrasonic transmission system including:

a CDMA spreader for spreading digital information to a number of carrier frequencies using a CDMA technique;

a digital to analog converter for digital to analog converting the spread information; and

an ultrasonic transducer for converting the digital to analog converted spread information into an ultrasound signal and for transmitting the ultrasound signal over an air interface.

8. The hands-free telephone according to claim 7, comprising a compression coder for compression coding analog information before digitizing the analog information to obtain the digital information to be spread by said CDMA spreader.

9. The hands-free telephone according to claim 8, wherein said compression coder reduces an effective bit rate to about 1-10 kbit/s.

10. The hands-free telephone according to claim 7, comprising a receiver that includes:

an ultrasonic transducer for receiving the transmitted ultrasound signal and for converting the received ultrasonic signal into an electrical signal;

an analog to digital converter for analog to digital converting the electrical signal; and

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A a CDMA despreader for despreading the analog to digital converted signal using a CDMA technique.